

REMARKS

Claims 1, 3-6, 8, 10-11, and 13 have been amended. New claims 14-17 have been added. No new matter has been added. Claims 1-17 are pending.

Support for new claims 14-17 may be found in paragraph 0038 of the specification as published.

Allowable Subject Matter

The Examiner objected to claim 10 as depending upon a rejected base claim but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner also indicated that claim 5 would be allowable if amended to overcome the rejection under 35 USC 112, 2nd paragraph, and rewritten in independent form including all of the limitations of the base claim and any intervening claims. The indication of allowable subject matter is greatly appreciated.

Independent claims 1 and 6 have been amended to incorporate some elements of claims 5 and 10, respectively. Independent claim 11 has also been amended to incorporate elements similar to some elements of claim 5.

Claim Rejections - 35 USC § 112

The Examiner rejected claims 3, 5, and 13 under 35 USC § 112, second paragraph as indefinite.

Specifically, the Examiner rejected claims 3 and 13 for containing the phrase “a predetermined electric field intensity range” twice, with the first recitation providing an unclear antecedent basis for the second recitation. Claims 3 and 13 have been amended to recite “a first

predetermined electric field intensity range” and “a second predetermined electric field intensity range”.

The Examiner rejected claim 5 as lacking proper antecedent basis for the term “the signal-meter signal”. Claim 1 has been amended, in part, to provide antecedent basis for “the signal-meter signal”.

Withdrawal of the rejections is solicited.

Claim Rejections - 35 USC § 102

The Examiner rejected claim 11 under 35 USC § 102(b) as anticipated by *Hansen* et al. (US 5,369,470). This rejection is respectfully traversed.

The fundamental principle of claim rejections under 35 USC § 102 is stated in MPEP §2131 as follows:

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference.

Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

Specifically, the rejection of claim 11 is traversed on the grounds that *Hansen* does not expressly or inherently describe the element “a controlling unit that controls filter characteristics of the filter unit and sets a boosting function or an attenuating function of the amplifying unit, in response to the signal-meter signal and the intermediate frequency signal carrier intensity signal”.

Claim 11, as amended, recites “a sound quality compensating unit for use in an AM radio receiver providing an audio signal, a signal-meter signal corresponding to the electric field strength of a received broadcast wave signal and an intermediate frequency signal carrier

intensity signal corresponding to intensity of carrier frequency component of intermediate frequency signal generated from the received broadcast wave signal". The sound quality compensating unit includes a filter unit and an amplifier unit, where the characteristics of the filter unit and the amplification/attenuation of the amplifier unit are controlled based on both the signal-meter signal and the intermediate frequency signal carrier intensity signal.

Hansen describes an FM receiver which detects interference by adjacent channels and reflections and controls the bandwidth of intermediate frequency filters to reduce the effects of such interference. In the rationale for the rejection of claim 11, the Office action cites various elements in Figure 1a of *Hansen* as equivalent to claimed elements. However, Figure 1a shows the intermediate frequency (IF) portions of the receiver. The amplitude controller 1 and pre-filter 2 operate at a first IF frequency of 10.7 MHz and the elements 6-13 after the mixer 3 operate at a second IF frequency of 700 kHz (col. 10, lines 14-23). Thus none of the elements in figure 1a is analogous to the sound quality compensating unit recited in claim 11.

Figure 1b of *Hansen* shows some audio frequency portions 21-26 of the receiver and a detector module 28 and evaluation circuit 37 which provide control signals A – L to control the IF and audio portions of the receiver. The detector module 28 and the evaluation circuit 37 control the receiver based on three signals received from the IF portion shown in figure 1a. The IF portion provides a rectified IF signal on line 1.3, which is used for adjacent channel detection, reflection detection, and muting decisions (col. 11, lines 60-64). The IF portion provides a control voltage on line 1.2, which is a measure, within a control range, of the level of the desired field intensity (col. 11, lines 65-68). This control voltage is at least similar to the signal-meter signal recited in claim 11. The IF portion also provides a demodulated low frequency signal on line 1.1 which is the audio signal and also used to detect adjacent channel takeover (col. 12, lines 4-9).

None of the signals provided by the IF portion of the receiver of *Hansen* is equivalent to the intermediate frequency signal carrier intensity signal recited in claim 11. Thus, in the absence of an equivalent signal, the receiver of *Hansen* cannot describe the element “a controlling unit that controls filter characteristics of the filter unit and sets a boosting function or an attenuating function of the amplifying unit, in response to the signal-meter signal and the intermediate frequency signal carrier intensity signal”. Since *Hansen* fails to expressly or inherently disclose at least one element of claim 11, it is respectfully submitted that claim 11 is allowable. Withdrawal of the rejection is solicited.

Claim Rejections - 35 USC § 103

The Examiner rejected claims 1, 4, and 6 under 35 USC § 103 as obvious from *Kennedy* et al. (US 5,930,693) in view of *Hansen*. This rejection is respectfully traversed.

The cited references fail to show “an intermediate frequency signal intensity detecting unit that generates an intermediate frequency signal carrier intensity signal indicating an intensity of a carrier frequency component of the intermediate frequency signal output from the intermediate frequency unit” and “a controlling unit that controls filter characteristics of the filter unit and sets a boosting function or an attenuating function of the amplifying unit, depending on the signal-meter signal and the intermediate frequency signal carrier intensity signal” as recited in claim 1. The cited references also fail to show analogous method elements recited in claim 6. Because these limitations are not found in the cited art, the rejection is not well founded and should be withdrawn.

A discussed with respect to the rejection of claim 11, *Hansen* describes an FM receiver that is controlled based on three signals output from the IF portion of the receiver. While one of these signals is similar to the signal-meter signal recited in claims 1 and 6, *Hansen* does not describe any signal equivalent to the intermediate frequency signal carrier intensity signal recited in the claims.

Kennedy describes a vehicular radio receiver including an intermediate frequency amplifier 14 controlled by an automatic gain control signal from an AGC circuit 19. The ACG signal of *Kennedy* at least similar to the signal-meter signal recited in the claims. The ACG circuit of *Kennedy* is configured to prevent abrupt changes in the level of the AGC signal and thus to prevent excessive changes in audio volume when the radio receiver experiences signal loss as the vehicle travels through an underpass. *Kennedy* does not describe any signal comparable to the intermediate frequency signal carrier level signal recited in the claims. Further, as acknowledged in the Office action, *Kennedy* does not disclose a sound compensating unit responsive to the signal-meter signal and the intermediate frequency signal carrier level signal as recited in the claims.

Since *Kennedy* or *Hansen*, individually and in combination, fail to disclose, teach, or suggest at least two elements of claims 1 and 6, it is respectfully submitted that independent claims 1 and 6 and depending claim 4 are allowable. Withdrawal of the rejection is solicited.

Claim Rejections - 35 USC § 103

The Examiner rejected claims 2-3 and 7-9 under 35 USC § 103 as obvious from *Kennedy* in view of *Hansen*, and further in view of *McNeill* et al. (US 7,457,757 B1). This rejection is respectfully traversed.

It is respectfully submitted that claims 2-3 and 7-9 are allowable at least by virtue of depending from allowable base claims. Withdrawal of the rejection is solicited.

Claim Rejections - 35 USC § 103

The Examiner rejected claims 12-13 under 35 USC § 103 as obvious from *Hansen* in view of *McNeill*. This rejection is respectfully traversed.

It is respectfully submitted that claims 12-13 are allowable at least by virtue of depending from an allowable base claim. Withdrawal of the rejection is solicited.

Disclaimers Relating to Claim Interpretation and Prosecution History Estoppel

Claims have been amended, and claims have been canceled, notwithstanding the belief that these claims were allowable. Except as specifically admitted below, no claim elements have been narrowed. Rather, cosmetic amendments have been made to the claims and to broaden them in view of the cited art. Claims 1, 3-6, 8, 10-11, and 13 have been amended solely for the purpose of expediting the patent application process, and the amendments were not necessary for patentability.

Any reference herein to “the invention” is intended to refer to the specific claim or claims being addressed herein. The claims of this application are intended to stand on their own and are not to be read in light of the prosecution history of any related or unrelated patent or patent application. Furthermore, no arguments in any prosecution history relate to any claim in this application, except for arguments specifically directed to the claim.

Conclusion

It is submitted that the independent and dependent claims include other significant and substantial recitations which are not disclosed in the cited references. Thus, the claims are also patentable for additional reasons. However, for economy the additional grounds for patentability are not set forth here.

The Examiner’s consideration of the references of record is appreciated. It is presumed that the Examiner has considered the entire disclosure of each of the references of record with respect to anticipation (individually) and obviousness (in any combination).

In view of all of the above, it is respectfully submitted that the present application is now in condition for allowance. Reconsideration and reexamination are respectfully requested and allowance at an early date is solicited.

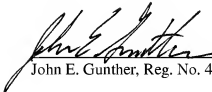
The Examiner is invited to call the undersigned registered practitioner to answer any questions or to discuss steps necessary for placing the application in condition for allowance.

References to "Applicant" herein are to the assignee of record, which the undersigned represents. An assignment has been recorded, and a Statement of Ownership and a General Power of Attorney have also been filed. Thus, the rights of the original Applicants/inventors have been excluded.

With respect to this filing, the Commissioner is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. 503456. Please consider this paper to be a petition for extension of time, if necessary.

Respectfully submitted,

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